

Larval Description and Notes on the Biology of
Anthocomus horni
(Coleoptera: Melyridae)

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The taxonomy of the North American representatives of *Anthocomus* has been covered by Marshall (1949). Their larvae have not been described and only one species, *Anthocomus auritus* (LeConte), has been figured (Böving and Craighead, 1930). Information concerning *Anthocomus* biology has not been published. For these reasons this information, although incomplete, is being presented. Terminology used here is adapted from Böving and Craighead (1930).

BIOLOGICAL NOTES.—On 18 April 1971, 29 May 1971 and 15 September 1972 nests of the black-billed magpie, *Pica pica* (Linn.), were collected on Coyote Grade, Nez Perce County, Idaho. Among insects found to inhabit the nests were larvae of *Anthocomus horni* (Fall).

The larvae of *A. horni* are not restricted to magpie nests. The species has been reared from tephritid galls growing on *Artemisia tridentata* Nuttall (Jordan Valley, Oregon, 2 May 1960, B. A. Foote) and from wood of *Pinus flexilis* James (Craters of the Moon National Monument, Idaho, 22 June 1965, D. S. Horning).

In northern Idaho *A. horni* spends the winter as a mature larva, pupating the following spring. Adults can be found from early May through mid July. They have been collected from the following plants: *Eriodictyon* sp., *Ceanothus* sp., *A. tridentata*, *Urtica Lyalli* Watson. *Anthocomus horni* has also been taken sweeping grass.

MATURE LARVA.—Length 8.1 mm, maximum width 1.6 mm, head capsule width 0.9 mm.

Body elongate, slightly tapered anteriorly and posteriorly; membranous areas mottled reddish to brown, sclerites testaceous to dark brown, surface clothed with short to long, erect or suberect, fulvous hairs.

Head with dorsal surface broadly flattened, slightly broader than long in dorsal view (6:5). Epicranium uniformly sclerotized; surface smooth to finely roughened, clothed with short to long hairs, reddish brown except for very dark brown pigmentation in ocular area; epicranial suture much shorter than cranial width in dorsal view (3:10); stemmata separate and entire, four on each side arranged in anterior row of three and single posterior one; anterior row lying in dorsoventral arc that projects slightly anteriorly, bottom stemma of arc largest with diameter of each successive stemma diminished slightly; posterior stemma slightly larger than anteroventral one. Frons subtriangular, nearly twice as broad as long; surface

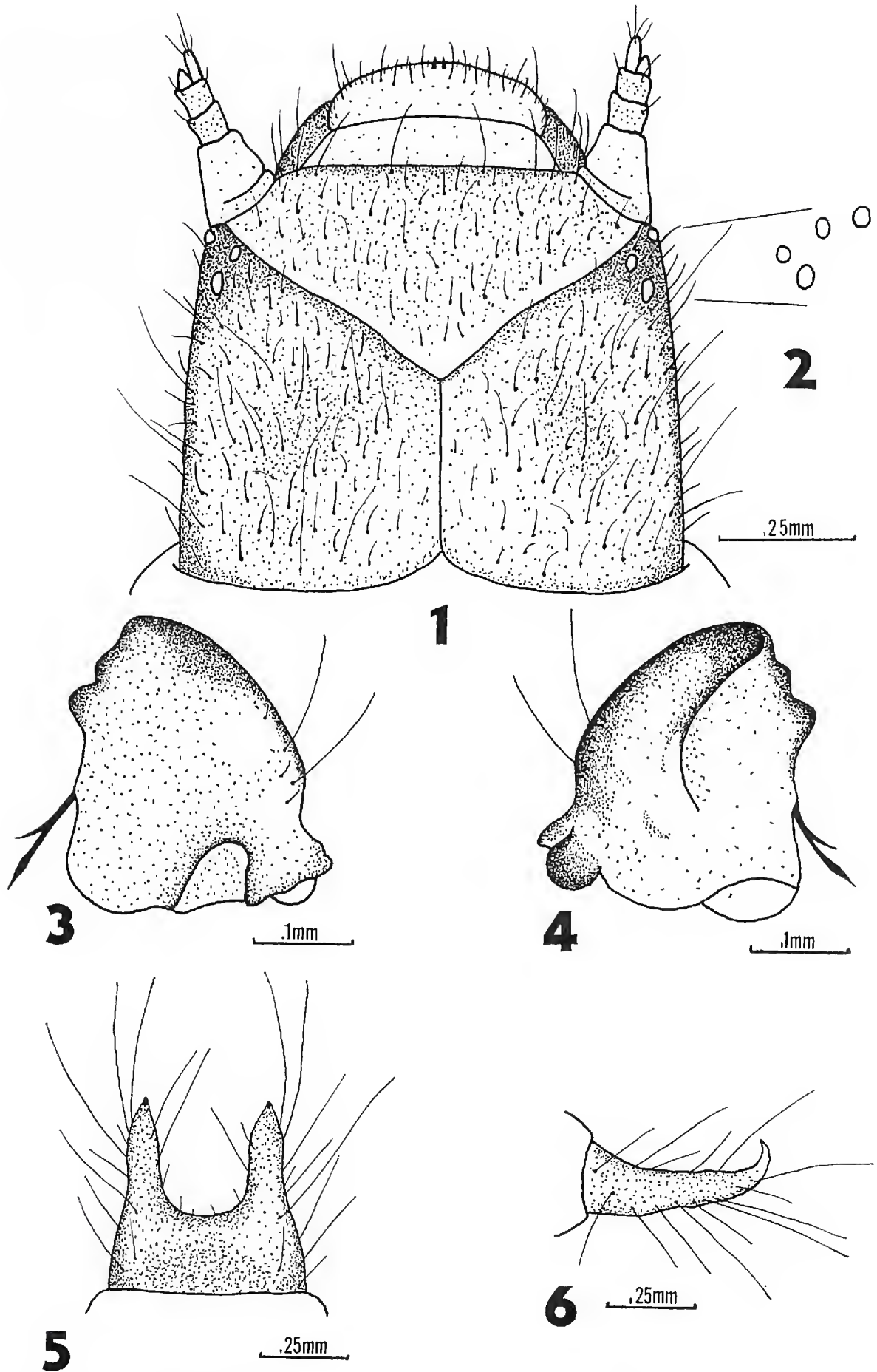


FIG. 1-6. *Anthocomus horni*, mature larva. FIG. 1. Head capsule dorsal view; FIG. 2. Stemmata lateral view; FIG. 3. Right mandible dorsal view; FIG. 4. Right mandible ventral view; FIG. 5. Urogomphi dorsal view; FIG. 6. Urogomphi lateral view.

uniformly sclerotized, irregularly sculptured and finely roughened; front margin truncate. Clypeus transverse, very lightly sclerotized, appearing almost membranous; surface very finely roughened; front margin feebly arcuate or truncate. Labrum transverse and tumescent, lightly sclerotized; surface very finely roughened, clothed with numerous short and long hairs irregularly positioned behind the feebly arcuate front margin. Antenna three segmented; basal membrane subequal to combined length of three distal segments, glabrous, cream colored, appearing inflated; basal segment slightly broader than long in dorsal view (4:3), slightly compressed laterally, circumscribed by broad reddish brown band over most of surface; middle segment slightly longer than basal segment in dorsal view (6:5), constricted at base and expanded gradually distally, slightly compressed laterally, circumscribed by a broad reddish brown band that covers most of its surface, bearing three long, stiff, cream colored hairs arising near apical margin, one hair arising laterally on each side and one middorsally, apex of middle segment bearing conical, glabrous appendix lateroventral to base of first segment, appendix shorter than apical antennal segment (2:3); apical segment subequal in length to second segment in dorsal view, digitiform, much longer than broad (4:1), color uniformly reddish brown except cream colored apex which bears four stiff hairs, three equal in length and equidistantly positioned around apical margin, fourth longer, arising from center of apex. Mandibles longer than broad in dorsal view (5:4); outer margin arcuate; inner margin tridentate, retinaculum pronounced and obliquely rounded, middle tooth small and broadly flattened, mandibular apex arcuately rounded; surface reddish brown at apex and along lateral margins, dorsal disc light brown, bearing two long and three short, stiff hairs arranged in two longitudinal rows; lacinia mobilis bifurcate, arising from inner margin half way between retinaculum and posterior angle. Maxillae and labium forming a prominent, ventrally protuding plate; maxilla with stipes lightly sclerotized, clothed with several short and long, erect hairs, palpifer membranous, bearing a single long, erect hair near inner margin, palpus with basal segment short and glabrous, middle segment about twice as long as basal segment, dorsolateral surface clothed with several short and long, stiff hairs, terminal segment about as long as middle segment, conical, apex with cluster of short, very stout hairs at apex; labrum with submentum and mentum membranous, clothed with scattered short and long, erect hairs, stipes labii with sclerotized base, bearing pair of long, erect hairs at front margin, palpus two segmented, basal segment subcylindrical, bearing several short, erect hairs around apex, terminal segment conical, about equal in length to basal segment, bearing a cluster of very short, stiff hairs at apex. Gula tumescent and glabrous, sides straight, converging slightly towards anterior end, posterior width subequal to length.

Thorax well developed, more than one-half as long as abdomen in dorsal view; prothorax subrectangular, tergum bearing long, straight and short, feebly arcuate sclerite on either side of ecdysial suture; mesothorax subtriangular, slightly wider than prothorax, tergum bearing a short, feebly arcuate sclerite on either side. Metathorax similar to but slightly broader than mesothorax.

Legs about equal in size and shape; pretarsus appendiculate, apex acuminate, basal tooth short with apex oblique.

Abdomen broadest at fifth segment; segments one through eight similar; segment nine with hind margin truncate, posterior surface covered by basal plate; urogomphi arising separately from basal plate, heavily sclerotized, nearly twice as long as

epicranial suture, distance between tips less than total length including basal plate (5:7), each urogomphus acuminate and recurved, surface reddish brown, bearing several erect hairs around middle.

MATERIAL EXAMINED.—Seven specimens from Coyote Grade, 9 miles E Lewiston, Nez Perce County, Idaho.

LITERATURE CITED

BÖVING, A. G. AND F. C. CRAIGHEAD. 1930. An illustrated synopsis of the principal larval forms of the order Coleoptera. Entomol. Amer., 11: 268–269.
MARSHALL, M. Y. 1949. Studies in the Malachiidae II. Entomol. Amer., 28: 126–132.

SCIENTIFIC NOTE

Ectoparasites and Nidicolous Acari of the Pocket Gopher, *Thomomys bottae* (Rodentia: Geomyidae).—Ectoparasites and nidicolous Acari were collected from 393 *Thomomys bottae* (Eydoux and Gervais) and seven gopher nests. All gophers were live-trapped from agricultural lands around Davis, California from April 1970 through November 1971 with 378 gophers taken from irrigated alfalfa fields, and the remainder from barley fields. The seven nests were taken from alfalfa fields. Table 1 presents the numerical relationships of ectoparasites removed from both gophers and nests. Ectoparasites were removed by brushing and detergent bath methods, and 15% of the hosts were treated with trypsin-KOH to recover all parasites. The recovery error as determined from the trypsin-KOH samples was 2.6% for *Geomydoecus oregonus* Price and Emerson, 4.8% for

TABLE 1. Ectoparasitic arthropods collected off of 393 *Thomomys bottae* and seven gopher nests from Davis, California from April 1970 through November 1971.

Ectoparasite	Number removed		Percent infested	
	gophers	nests	gophers	nests
<i>Geomydoecus oregonus</i> (Trichodectidae)	140,803	—	98.6	—
<i>Foxella ignota</i> (Ceratophyllidae)	4	—	0.5	—
<i>Geomylichus</i> sp. (Listrophoridae)	27,623	—	76.7	—
<i>Hirstionyssus femoralis</i> (Laelapidae)	10,334	368	79.9	100.0
<i>Haemolaelaps geomys</i> (Laelapidae)	444	1,425	22.3	85.7
<i>Leeuwenhoekia delosa</i> (Trombiculidae)	1	—	0.2	—